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RAW SEQUENCE LISTING

DATE: 03/12/2002

PATENT APPLICATION: US/10/027,075

TIME: 09:52:17

Input Set : N:\Crf3\RULE60\10027075.raw

Output Set: N:\CRF3\03122002\J027075.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Gray, Gary S. et al.

7 (ii) TITLE OF INVENTION: CTLA4-Immunoglobulin Fusion Proteins

8 Having Modified Effector Functions and Uses Therefor

10 (iii) NUMBER OF SEQUENCES: 32

12 (iv) CORRESPONDENCE ADDRESS:

13 (A) ADDRESSEE: LAHIVE & COCKFIELD

14 (B) STREET: 60 State Street, suite 510

15 (C) CITY: Boston

16 (D) STATE: Massachusetts

17 (E) COUNTRY: USA

18 (F) ZIP: 02109-1875

ENTERED

20 (v) COMPUTER READABLE FORM:

21 (A) MEDIUM TYPE: Floppy disk

22 (B) COMPUTER: IBM PC compatible

23 (C) OPERATING SYSTEM: PC-DOS/MS-DOS

24 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

26 (vi) CURRENT APPLICATION DATA:

C--> 27 (A) APPLICATION NUMBER: US/10/027,075

C--> 28 (B) FILING DATE: 20-Dec-2001

29 (C) CLASSIFICATION:

31 (vii) PRIOR APPLICATION DATA:

32 (A) APPLICATION NUMBER: 09/227,595

33 (B) FILING DATE:

35 (viii) ATTORNEY/AGENT INFORMATION:

36 (A) NAME: Amy E. Mandragouras

37 (B) REGISTRATION NUMBER: 36,207

38 (C) REFERENCE/DOCKET NUMBER:

40 (ix) TELECOMMUNICATION INFORMATION:

41 (A) TELEPHONE: (617)227-7400

42 (B) TELEFAX: (617)227-5941

45 (2) INFORMATION FOR SEQ ID NO: 1:

47 (i) SEQUENCE CHARACTERISTICS:

48 (A) LENGTH: 43 base pairs

49 (B) TYPE: nucleic acid

50 (C) STRANDEDNESS: single

51 (D) TOPOLOGY: linear

53 (ii) MOLECULE TYPE: cDNA

57 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

59 CATTCTAGAA CCTCGACAAG CTTGAGATCA CAGTTCTCTC TAC

43

61 (2) INFORMATION FOR SEQ ID NO: 2:

63 (i) SEQUENCE CHARACTERISTICS:

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64          (A) LENGTH: 46 base pairs
65          (B) TYPE: nucleic acid
66          (C) STRANDEDNESS: single
67          (D) TOPOLOGY: linear
69      (ii) MOLECULE TYPE: cDNA
73      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
75 CAGCAGGCTG GGCCACGTGC ATGCGGAGT GGACACCTGT GGAGAG          46
77 (2) INFORMATION FOR SEQ ID NO: 3:
79      (i) SEQUENCE CHARACTERISTICS:
80          (A) LENGTH: 46 base pairs
81          (B) TYPE: nucleic acid
82          (C) STRANDEDNESS: single
83          (D) TOPOLOGY: linear
85      (ii) MOLECULE TYPE: cDNA
89      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
91 CTCTCCACAG GTGTCCACTC CGCAATGCAC GTGGCCCAGC CTGCTG          46
93 (2) INFORMATION FOR SEQ ID NO: 4:
95      (i) SEQUENCE CHARACTERISTICS:
96          (A) LENGTH: 46 base pairs
97          (B) TYPE: nucleic acid
98          (C) STRANDEDNESS: single
99          (D) TOPOLOGY: linear
101     (ii) MOLECULE TYPE: cDNA
105     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
107 TGTGTGTGGA ATTCTCATTA CTGATCAGAA TCTGGGCACG GTTCTG          46
109 (2) INFORMATION FOR SEQ ID NO: 5:
111     (i) SEQUENCE CHARACTERISTICS:
112         (A) LENGTH: 78 base pairs
113         (B) TYPE: nucleic acid
114         (C) STRANDEDNESS: single
115         (D) TOPOLOGY: linear
117     (ii) MOLECULE TYPE: cDNA
121     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
123 GCATTTTAAG CTTTTCTTG ATCAGGAGCC CAAATCTTCT GACAAAAC TC ACACATCTCC          60
125 ACCGTCTCCA GGTAAGCC          78
127 (2) INFORMATION FOR SEQ ID NO: 6:
129     (i) SEQUENCE CHARACTERISTICS:
130         (A) LENGTH: 20 base pairs
131         (B) TYPE: nucleic acid
132         (C) STRANDEDNESS: single
133         (D) TOPOLOGY: linear
135     (ii) MOLECULE TYPE: cDNA
139     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
141 TAATACGACT CACTATAGGG          20
143 (2) INFORMATION FOR SEQ ID NO: 7:
145     (i) SEQUENCE CHARACTERISTICS:
146         (A) LENGTH: 66 base pairs
147         (B) TYPE: nucleic acid
148         (C) STRANDEDNESS: single

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149         (D) TOPOLOGY: linear
151     (ii) MOLECULE TYPE: cDNA
155     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
157 GAGCATTTTC CTGATCAGGA GTCCAAATAT GGTCCCCCAC CCCATCATCC CCAGGTAAGC      60
159 CAACCC                                                                    66
162 (2) INFORMATION FOR SEQ ID NO: 8:
164     (i) SEQUENCE CHARACTERISTICS:
165         (A) LENGTH: 68 base pairs
166         (B) TYPE: nucleic acid
167         (C) STRANDEDNESS: single
168         (D) TOPOLOGY: linear
170     (ii) MOLECULE TYPE: cDNA
174     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
176 GCAGAGGAAT TCGAGCTCGG TACCCGGGGA TCCCCAGTGT GGGGACAGTG GGACCCGCTC      60
178 TGCCTCCC                                                                    68
182 (2) INFORMATION FOR SEQ ID NO: 9:
184     (i) SEQUENCE CHARACTERISTICS:
185         (A) LENGTH: 59 base pairs
186         (B) TYPE: nucleic acid
187         (C) STRANDEDNESS: single
188         (D) TOPOLOGY: linear
190     (ii) MOLECULE TYPE: cDNA
194     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
196 GGGTTTTTGGG GGAAGAGGA AGACTGACGG TGCCCCCTCG GCTTCAGGTG CTGAGGAAG      59
198 (2) INFORMATION FOR SEQ ID NO: 10:
200     (i) SEQUENCE CHARACTERISTICS:
201         (A) LENGTH: 56 base pairs
202         (B) TYPE: nucleic acid
203         (C) STRANDEDNESS: single
204         (D) TOPOLOGY: linear
206     (ii) MOLECULE TYPE: cDNA
210     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
212 CATCTCTTCC TCAGCACCTG AAGCCGAGGG GGCACCGTCA GTCTTCCTCT TCCCCC      56
214 (2) INFORMATION FOR SEQ ID NO: 11:
216     (i) SEQUENCE CHARACTERISTICS:
217         (A) LENGTH: 99 base pairs
218         (B) TYPE: nucleic acid
219         (C) STRANDEDNESS: single
220         (D) TOPOLOGY: linear
222     (ii) MOLECULE TYPE: cDNA
226     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
228 CGCACGTGAC CTCAGGGGTC CGGGAGATCA TGAGAGTGTC CTTGGGTTTT GGGGGGAACA      60
230 GGAAGACTGA TGGTGCCCCC TCGAACTCAG GTGCTGAGG                              99
232 (2) INFORMATION FOR SEQ ID NO: 12:
234     (i) SEQUENCE CHARACTERISTICS:
235         (A) LENGTH: 99 base pairs
236         (B) TYPE: nucleic acid
237         (C) STRANDEDNESS: single
238         (D) TOPOLOGY: linear

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240      (ii) MOLECULE TYPE: cDNA
244      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
246 CCTCAGCACC TGAGTTCGAG GGGGCACCAT CAGTCTTCCT GTTCCCCCCA AAACCCAAGG      60
248 ACACTCTCAT GATCTCCCGG ACCCCTGAGG TCACGTGCG      99
250 (2) INFORMATION FOR SEQ ID NO: 13:
252      (i) SEQUENCE CHARACTERISTICS:
253          (A) LENGTH: 43 base pairs
254          (B) TYPE: nucleic acid
255          (C) STRANDEDNESS: single
256          (D) TOPOLOGY: linear
258      (ii) MOLECULE TYPE: cDNA
262      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
264 CATTGCTTA CCTGACAAG CTTGAGATCA CAGTTCTCTC TAC      43
266 (2) INFORMATION FOR SEQ ID NO: 14:
268      (i) SEQUENCE CHARACTERISTICS:
269          (A) LENGTH: 21 base pairs
270          (B) TYPE: nucleic acid
271          (C) STRANDEDNESS: single
272          (D) TOPOLOGY: linear
274      (ii) MOLECULE TYPE: cDNA
278      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
280 GGAGTGGACA CCTGTGGAGA G      21
282 (2) INFORMATION FOR SEQ ID NO: 15:
284      (i) SEQUENCE CHARACTERISTICS:
285          (A) LENGTH: 39 base pairs
286          (B) TYPE: nucleic acid
287          (C) STRANDEDNESS: single
288          (D) TOPOLOGY: linear
290      (ii) MOLECULE TYPE: cDNA
294      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
296 CTCCACAGGT GTCCACTCCG CAATGCACGT GGCCCAGCC      39
298 (2) INFORMATION FOR SEQ ID NO: 16:
300      (i) SEQUENCE CHARACTERISTICS:
301          (A) LENGTH: 39 base pairs
302          (B) TYPE: nucleic acid
303          (C) STRANDEDNESS: single
304          (D) TOPOLOGY: linear
306      (ii) MOLECULE TYPE: cDNA
310      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
312 GAGGTTGTAA GGACTCACCT GAAATCTGGG CTCCGTTGC      39
314 (2) INFORMATION FOR SEQ ID NO: 17:
316      (i) SEQUENCE CHARACTERISTICS:
317          (A) LENGTH: 39 base pairs
318          (B) TYPE: nucleic acid
319          (C) STRANDEDNESS: single
320          (D) TOPOLOGY: linear
322      (ii) MOLECULE TYPE: cDNA
326      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
328 GCAACGGAGC CCAGATTTC A GGTGAGTCCT TACAACCTC      39

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330 (2) INFORMATION FOR SEQ ID NO: 18:
 332 (i) SEQUENCE CHARACTERISTICS:
 333 (A) LENGTH: 39 base pairs
 334 (B) TYPE: nucleic acid
 335 (C) STRANDEDNESS: single
 336 (D) TOPOLOGY: linear
 338 (ii) MOLECULE TYPE: cDNA
 342 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:
 344 GGCTAGATAT CTCTAGACTA TAAATCTCTG GCCATGAAG 39
 346 (2) INFORMATION FOR SEQ ID NO: 19:
 348 (i) SEQUENCE CHARACTERISTICS:
 349 (A) LENGTH: 73 base pairs
 350 (B) TYPE: nucleic acid
 351 (C) STRANDEDNESS: single
 352 (D) TOPOLOGY: linear
 354 (ii) MOLECULE TYPE: cDNA
 358 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:
 360 GGCAC TAGGT CGACTCTAGA AACTGAGGAA GCAAAGTTTA AATTCTACTC ACGTTTAATC 60
 362 TGGGCTCCGT TGC 73
 364 (2) INFORMATION FOR SEQ ID NO: 20:
 366 (i) SEQUENCE CHARACTERISTICS:
 367 (A) LENGTH: 43 base pairs
 368 (B) TYPE: nucleic acid
 369 (C) STRANDEDNESS: single
 370 (D) TOPOLOGY: linear
 372 (ii) MOLECULE TYPE: cDNA
 376 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:
 378 GCAGAGAGAC ATATGGCAAT GCACGTGGCC CAGCCTGCTG TGG 43
 380 (2) INFORMATION FOR SEQ ID NO: 21:
 382 (i) SEQUENCE CHARACTERISTICS:
 383 (A) LENGTH: 50 base pairs
 384 (B) TYPE: nucleic acid
 385 (C) STRANDEDNESS: single
 386 (D) TOPOLOGY: linear
 388 (ii) MOLECULE TYPE: cDNA
 392 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:
 394 GCAGAGAGAG GATCCTCAGT CAGTTAGTCA GAATCTGGGC ACGGTTCTGG 50
 396 (2) INFORMATION FOR SEQ ID NO: 22:
 398 (i) SEQUENCE CHARACTERISTICS:
 399 (A) LENGTH: 107 base pairs
 400 (B) TYPE: nucleic acid
 401 (C) STRANDEDNESS: single
 402 (D) TOPOLOGY: linear
 404 (ii) MOLECULE TYPE: cDNA
 408 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:
 410 GGCAC TAGTC ATGAAATACC TATTGCCTAC GGCAGCCGCT GGATTGTTAT TACTCGCTGC 60
 412 CCAACCAGCG ATGGCCG CAG CAATGCACGT GGCCAGCCT GCTGTGG 107
 418 (2) INFORMATION FOR SEQ ID NO: 23:
 420 (i) SEQUENCE CHARACTERISTICS:

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/027,075

DATE: 03/12/2002

TIME: 09:52:18

Input Set : N:\Crf3\RULE60\10027075.raw

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L:27 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:28 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]